Functional Dependencies based on ER model

**Table 1 – COACH**

Roles

COACH (COACH\_ID (A), EXPERIENCE (B), NAME (C), SPORT (D));

FD SET ->

{

COACH\_ID -> NAME;

COACH\_ID -> EXPERIENCE;

COACH\_ID -> SPORT;

}

Closure

1. +  = {A, B,C,D}
2. + = {B}
3. +  = {C}
4. + = {D}

Candidate Key = { A }

Super Key = {A, AB, AC,AD}

{ A->B, A->C,A->D}

2NF = There’s no partial dependency

3NF = There’s no transitive dependency

BCNF = No s

**Table 2 – TEAM**

Roles

TEAM (TEAM\_ID (A), NAME (B), REG\_FEE (C), POINTS (D));

FD SET - >

{

TEAM\_ID -> NAME;

TEAM\_ID -> REG\_FEE;

TEAM\_ID -> POINTS;

}

Closure

1. + = {A,B,C,D}
2. + = {B}
3. + = {C}
4. + = {D}

Candidate Key = { A }

Super Key = {A, AB, AC,AD}

{ A->B, A->C,A->D}

2NF = There’s no partial dependency

3NF = There’s no transitive dependency

BCNF = No s

**Table 3 – SPONSOR**

Roles

SPONSOR (SP\_ID (A), COMPANY (B), AMOUNT (C));

FD SET - >

{

SP\_ID -> COMPANY;

SP\_ID -> AMOUNT;

}

Closure

1. +  = {A,B,C}
2. + = {B}
3. + = {C}

Candidate Key = { A }

Super Key = {A, AB, AC}

{A->B, A->C}

2NF = There’s no partial dependency

3NF = There’s no transitive dependency

BCNF = No s

**Table 4 – EQUIPMENT**

Roles

EQUIPMENT (EQ\_ID (A), QUANTITY (B), NAME (C));

FD SET - >

{

EQ\_ID -> QUANTITY;

EQ\_ID -> NAME;

}

Closure

1. +  = {A,B,C}
2. + = {B}
3. + = {C}

Candidate Key = { A }

Super Key = {A, AB, AC}

{A->B, A->C}

2NF = There’s no partial dependency

3NF = There’s no transitive dependency

BCNF = No s

**Table 5 – VENUE**

Roles

VENUE (V\_ID (A), CAPACITY (B), LOCATION (C));

FD SET - >

{

V\_ID -> CAPACITY;

V\_ID -> LOCATION;

}

Closure

1. +  = {A,B,C}
2. + = {B}
3. + = {C}

Candidate Key = { A }

Super Key = {A, AB, AC}

{A->B, A->C}

2NF = There’s no partial dependency

3NF = There’s no transitive dependency

BCNF = No s

**Table 6 – ORGANIZER**

Roles

ORGANIZER (OG\_ID (A), NAME (B), EVENT\_ORGANIZED (C));

FD SET - >

{

OG\_ID -> NAME;

OG\_ID -> EVENT\_ORGANIZED;

}

Closure

1. +  = {A,B,C}
2. + = {B}
3. + = {C}

Candidate Key = { A }

Super Key = {A, AB, AC}

{A->B, A->C}

2NF = There’s no partial dependency

3NF = There’s no transitive dependency

BCNF = No s

**Table 7 – EVENT**

Roles

EVENT (E\_ID (A), NAME (B), LOCATION (C));

FD SET - >

{

E\_ID -> NAME;

E\_ID -> LOCATION;

}

Closure

1. +  = {A,B,C}
2. + = {B}
3. + = {C}

Candidate Key = { A }

Super Key = {A, AB, AC}

{A->B, A->C}

2NF = There’s no partial dependency

3NF = There’s no transitive dependency

BCNF = No s

**Table 8 – TICKETS**

Roles

TICKETS (NO\_OF\_TICKETS (A), PRICE (B));

FD SET - >

{

NO\_OF\_TICKETS -> PRICE;

}

Closure

1. +  = {A,B}
2. + = {B}

Candidate Key = { A }

Super Key = {A, AB}

{A->B}

2NF = There’s no partial dependency

3NF = There’s no transitive dependency

BCNF = No s